NATIONAL OFFICE
250C - 2nd Avenue S.
Saskatoon, Sask., S7K 2M1
Fax (306) 664-6226
Tel (306) 652-9465

(5)

national farmers union

In Union is Strength

National Farmers Union

Submission

to the

House of Commons Legislative Committee

on the subject of

Bill C-15 - The Plant Breeders' Rights Act

presented

Ottawa, Ontario October 31, 1989

20th Anniversary 1969-1989

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INTRODUCTION:

The National Farmers Union is a voluntary membership organization of farm families. The NFU is chartered by an Act of Parliament passed in 1970. We are a general organization in the sense that our members are producers of a broad cross-section of crops, livestock and livestock products. Our policies, therefore, are not dedicated to extend priority in opportunity and market privilege to any specific commodity in such a way as to disadvantage the production of another.

We appreciate this opportunity to appear before your Committee on the matter of Bill C-15. As practising farmers, it shall be we who will be most profoundly affected by the provisions of Bill C-15.

BACKGROUND TO THE PLANT BREEDERS' RIGHTS ISSUE:

The introduction into Parliament of Bill C-15 on May 8th, 1989 represented only the latest effort of the federal government to invoke plant patenting legislation. It was preceded by the introduction of Bill C-107 which attained first reading on January 28, 1988 and by Bill C-32 introduced May 29th, 1980.

These bills have been among the more recent attempts of the government to introduce plant breeders' patent legislation. In 1950 a Plant Patent Act was drafted but never introduced. The issue remained dormant until 1971 when a University of Guelph conference on the issue recommended to the Canadian Agricultural Services Coordinating Committee (CASCC) that the principle of such legislation be accepted. It was accepted by the CASCC and subsequently endorsed by Agriculture Canada in 1974.

The Seeds Act of 1959 has provided the basis of regulation in Canada "respecting the testing inspection, quality and sale of seeds" and, we submit, has served the farmers of Canada very well. The concepts on which Bill C-15 are based extend well beyond the basic provisions contained in the Seeds Act.

Bill C-32, and subsequently Bill C-107, encountered stiff public opposition from numerous public interest groups across the country, including our own. We continue to oppose the concepts of patenting plant life in the manner described in Bill C-15 for reasons we shall address in this presentation.

ISSUES AND CONCERNS ABOUT PBR LEGISLATION:

The passage of Bill C-15 by Parliament will unleash a "Pandora's Box" of problems and complications in the agriculture sector that will far outweigh any of the potential benefits this government may currently visualize. Farmers, we believe, will be among the most adversely affected.

Reasons the government has advanced to justify the need for plant breeders' legislation include:

(1) to stimulate plant breeding in Canada to give Canadian growers more and better crop varieties;

(2) to increase participation by the private sector in plant variety breeding;

(3) to give Canadian growers access to protected foreign varieties;

(4) to promote the export of Canadian varieties to other countries; and

(5) to support plant variety breeding in the public sector, in Agriculture Canada, and in universities and other provincial facilities.

In the attainment of these objectives, the Research Branch of Agriculture Canada has, since 1988, developed a branch-wide policy framework and strategic plan* aimed at:

* "Progress in Research" Vol. 10, 1989, Agriculture Canada Research Branch

. facilitating partnerships with industry
. commercializing branch technology
. acquiring needed foreign science and technology

We wish to make it clear that we believe the Research Branch of Agriculture Canada has served farmers extremely well over the years. The NFU has always supported the concept of publicly-funded research because it benefits the entire nation. But additionally, we know that basic research and development into crop improvement, for example, requires the long-term commitment and dedication of research scientists. Government should best be able to provide funding stability for dedicated, long-term projects because it represents an investment in our future food production capabilities but to what extent should the public research effort be turned over to the private sector for exploitation?

New crop varieties have been developed to overcome specific problems - disease - drought or insect resistance, quality, yield potential and so forth. The benefits of this research have been provided at a cost which has made the adaptation and production of new crop varieties and application of new technologies affordable and enhanced farmers' ability to compete in world markets for grain.

Farmers have known that when a new crop variety is licensed by Agriculture Canada, it can generally be trusted to live up to advance billings. They also know that priorities in public research are usually determined as the result of broad-sector consideration and concensus.

In short, farmers have always been able to trust and rely upon our public agricultural research institutions to do the right things and come up with the right answers.

But what lies ahead?

The introduction of Bill C-15 has once again brought home the realization that we are confronting a new philosophy and approach to the plant breeding scene. The feeling of partnership between the farmer and public researcher is being threatened. Through the government's new emphasis on privatization, cost recovery and

deregulation, it will be certain that the positive relationship which has existed for farmers in our public research programs will be eroded.

The government, of course, will stoutly deny that this will in fact occur - but the erosion of research capability has already been in progress for some time.

Anxieties and concern followed the release of the Nielsen Task Force on Program Review. Its observations on the performance of R & D are contradictory, to say the least.

The report observed: "there is ample evidence that federal investment in agricultural research and development has been very good for Canada." But the report then proceeded to emphasize that R & D should in future serve producers less and agri-business more "based on commodity business plans which address world market opportunities and Canadian supply capabilities."

The Task Force concluded that "the current investment is not too high, relative to its long term track record of return on investment" and then states: "There are also no compelling arguments for investing more under the present circumstances."

What kind of rationalization is this when over the past 15 years, states the report, the Branch has experienced a gradual reduction of human resources of some 125 person years! The investment has been so good that we're divesting ourselves!

Who can forget the bitter encounters that followed the events of 1984 and 1985 crop years and the wholesale invasion into the prairie region of a number of unlicensed varieties of U.S. short-strawed wheat?

The unchallenged proliferation in their production in 1984 and 1985 was scandalous. Some were indistinguishable by sight from our high protein red springs and presented a genuine threat to our export quality standards. The Chief Commissioner of the Canadian Grain Commission, H.D. Pound, left no doubt of his concern over this rapidly merging problem in his public statement of resignation made

on February 25, 1986. He concluded:

"Until sophisticated technologies to distinguish these new varieties are a reality, Canada must hold to its strict quality standards as established under the current system. It is my hope that the Canadian Grain Commission will continue to resist undue pressures that could damage Canada's good reputation which has been built up over many years among international buyers of Canadian grains and oilseeds."

Pressures from whom? The question was never directly answered but we should note that this blatant violation occurred while we were still in charge of our own house. Apparently a "blind eye" was turned to their illicit production until it became evident that our reputation for high-quality standards were undermined and seriously threatened.

On January 17, 1986, an "Unprescribed Wheat Committee" was structured by the Minister of State, Canadian Wheat Board, (himself an admitted producer of unlicensed varieties*) which resulted in the banning of further commercial export deliveries of these grains into the country elevator system.

It is not difficult to presume that based on the experience of open violation of our current strict licensing regulations encountered with the U.S. short-strawed unlicensed varieties, prospects for an increased number of violations under PBR legislation will not diminish.

We are concerned that an increasing amount of our public sector research in plant breeding will shift to become basic and/or industry supported. Although the government has stated this will not happen, there is evidence to the contrary among member countries of the International Union for the Protection of New Varieties of Plants (UPOV).

Loyns and Begleiter of the University of Manitoba have prepared a working paper based on a questionnaire sent to UPOV member country researchers. They report: "Respondents were almost unanimous in their belief that there had been a shift in emphasis in public

* Hansard, April 2, 1985, Page 3624

sector plant breeding away from varietal development."* The UPOV members surveyed by Loyns and Begleiter reported that seed prices had increased following the passage of PBR legislation but "attributed the increase to inflation rather than to PBR."

Further, there is a distinct possibility that as a result of increased competition among plant breeders following the passage of Bill C-15, there is a possibility a reduction in the exchange of germplasm between and among breeders could occur since some genetic traits will have greater commercial value under a variety protection regime.

This issue was raised by Dr. Ian Edwards, Chairman of the National Wheat Improvement Committee in the U.S., in a September, 1987 article published in the Genetic Engineering News. He reports concern over "a move toward patenting genes that are not the result of recent innovative research" and adds:

> "We as members of the N.W.I.C. ask the administrators be made aware of the adverse effects of patents on crop improvement. We feel it imperative to distinguish between true innovation and the patenting of routine procedures, thresholds of gene expression for a particular trait or specific genes that occur naturally within a species or related genera and species. Where patent applications appear unwarranted or unjustied, we feel that they should be vigorously challenged."

While we are led to believe that competition will somehow keep prices for new varieties in line, the competition between the various plant breeding corporations will lead them to protect their competitive edge by patenting new found know-how such as the discovery of a disease-resistant trait or a high protein feature which would then be protected for a period of 18 years, according them a monopoly in profiting from the technology.

Furthermore, we believe that among seed companies, increased emphasis will be placed in developing hybrid varieties which will not successfully reproduce from their own seed.

This has already occurred and brings into sharp contrast the values that distinguish a public research effort from a private one. Dr. Wally Beversdorf, as a publicly-paid researcher at the

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* R.M.A. Loyns and A.J. Begleiter, "An examination of the potential economic effects of plant breeders' rights in Canada," Consumer & Corporate Affairs, Ottawa, (undated)

University of Guelph, was successful in developing a variety of self-regenerating canola that was herbicide-resistant. This was a commendable achievement in serving the interests of farmers.

In 1986, Beversdorf was appointed as Scientific Manager of the Plant Biology Division of Allelix Inc. Its objective, under Beversdorf's expertise, was to develop a hybrid canola that had similar traits to the variety previously developed except the ability to remain genetically faithful.

We anticipate the research direction of all multinational seed companies will be devoted toward emphasizing hybrid development in order to maximize profits.

The profit objective theory in plant breeding was confirmed in February, 1988 when Dr. Brian Harvey, Director of the Crop Development Centre, University of Saskatchewan, Saskatoon, warned that publicly-funded barley breeding programs could soon disappear. He said barley is not a profitable exercise and the private sector is unlikely to fill the void if public programs come to an end. There is a feeling in the research community that the government has a long-term goal to eliminate varietal development from its programs. There were 12 scientists working on barley in 1973. That is now down to 6, while the number studying barley diseases is down from 22 to 16 and on quality, from 5 to 2.5.

Should this situation worsen, Canadian farmers will, of course, become more dependent upon multinationals who hold foreign barley patents they wish to market in this country once patent rights are established.

In the May, 1986 edition of the U.S. publication, "Seedman's Digest," Dr. Hans H. Leenders, Secretary General to the International Seed Trade Federation (FIS) based in Switzerland, reflected on 25 years of service to the Federation.

Dr. Leenders (the third generation owner of a family seed business) noted that in 1962 he observed the seed industry was gradually switching from commercial seed to varietal seed and this had important consequences for a great number of companies who were

more commodity traders than seed specialists. He noted that:

"Where in the past the free trade of commercial seed (seed not traded under variety name) among a great number of participants had been the normal pattern in the international seed trade, this gradually changed into a market with fewer companies participating, trading in seed of varieties grown on contracts often represented in foreign countries by a sole agent.

"The seed industry is, after the change from commercial seed to mostly propriety varieties to date, confronted with the second "revolution" called forth by technical developments and a concentration of seed companies under the umbrella of big, very often financially strong companies which concentration is linked with these technical developments. As these companies are often big multinationals this is in itself for some sufficient reason to wage war against this development."

He predicted that if the gene technology is highly successful (which it is becoming), further concentration in the number of seed companies would increase the difficulty in policing infringements on patented material. Dr. Leenders' reference to "policing" was specifically directed to the traditional practice of farmers who regenerate their own seed requirements. He stated:

"For certain species of vegetables, beet and potatoes the new, rapid multiplications techniques form an acute danger. Under most legislations reproductive material thus produced comes under the wording of their protection act. However, as in most countries the farmer may do on his own farm whatever he chooses, i.e. among other things produce young plants for a commercial production of the produce without the authorization of the breeder, the seed industry will have to fight hard for a better kind of protection.

"As a matter of fact the freedom to do in one's own house/company is not absolute. Clandestine alcohol, fire arms, drugs production even for one's own need and quite some other things are in most countries prohibited.

"Plant reproductive material has increasingly become a technical product in which much money has been invested. Even though it has been a tradition in most countries that a farmer can save seed from his own crop, it is under the changing circumstances not equitable that farmers can use this seed and grow a commercial crop out of it without payment of a royalty."

We find it difficult to equate the similarity between food production and the illicit production of drugs or alcohol, however, this is the alien environment into which we, as farmers, are being drawn by Bill C-15 - into a circumstance where in future years we may be criminalized for "not paying taxes to Caesar."

The issue of "farmers' privilege" has already surfaced in France. In the Paris-based publication, "Agra-Europe," November 1988, the situation in that country is specifically outlined. "Agra-Europe" reports:

"Breeders in France have been complaining about the farmers' privilege, considering it an outright infringement of their breeders' rights and a loss to investment in research. One French breeding organisation, SICASOV, calculates that the loss of royalties due to farmers' home saved seed use amounts to some 220-250 million francs a year for cereals alone. But such complaints that until now remained at the level of daily grumbling literally blew up two years ago to the point that breeders were taking farmers to court.

"Last September, the Court of Appeals in Nancy confirmed the judgement pleaded by a group of plant breeders that farmer seed production was an infringement of plant breeders' rights -- and this has spurred off a very intense battle in the French countryside. A committee (the Demeter 88 Committee) has been established to defend the farmers with the help of Parisian lawyers. One of their attorneys recently declared: "Farmers are the owners of their harvest; this very restrictive interpretation of the (Plant Breeders' Rights) law of 1970 shows a total ignorance of farmers' rights." The committee recently went to the Minister of Agriculture to voice their concerns, stressing that the court decision, if applied, would disadvantage French agriculture as all the other EEC members respect the farmers' privilege in their own countries. In the meantime, the battle is turning into a war: some 37 trials are being carried out right now in the courts of Paris alone, not to mention other French cities. Also, some breeders and the SICASOV have now gone to the Supreme Court to accuse ONIC of "abuse of power" in maintaining its authorisation of home seed production."

Considering the multinational nature of the giants in the seed industry, we expect Canadian farmers should, in future, expect facing similar challenges.

While Clause 5 of Bill C-15 permits farmers to save their own seed from protected varieties for re-planting without infringing the exclusive right of the holder, this provision could be lost in future if changes occur in the international rules as established by UPOV.

COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS:

The issue of competition policy and intellectual property rights must also be examined within the context of Bill C-15, particularly as it may affect farmers.

The Organization for Economic Co-operation and Development (OECD) reports there are a number of committees presently working "to analyse and interpret the process of technological change and its economic, social and international implications."

Competition policy, notes the OECD in a recent publication*,

* Competition Policy and Intellectual Property Rights - OECD, Paris, 1989

may affect incentives to create new technology in three main ways. These are:

. Competition policy in many Member countries guards against the creation of excessive concentration and market power through merger control.

. The interaction between competition policy and innovation concerns the application of competition rules to research and development joint ventures.

. The relationship between competition policy and the licensing of intellectual property rights.

The OECD report notes that given the importance of innovation to growth, care should be exercised so that competition law enforcement does not hamper the creation and diffusion of innovations. "However," continues the report, "competition authorities cannot simply adopt a permissive policy as patent and know-how licensing agreements can lead to serious cartel problems, including price fixing, output restrictions and market and customer divisions." In such circumstances, the role of competition policy assumed great importance.

A 1974 Report of the OECD examined the issue of patents and licenses, however, the matter of licensing know-how was not an issue of the day. Currently, the OECD notes, some competition policy authorities believe that firms are increasingly keeping their intellectual property in the form of "know-how" rather than seeking patent protection, citing the costs and delays in obtaining patents, the lengthy litigation which can accompany a patent application and the weak protection afforded by the patent laws of some developing countries.

The OECD explains that "know-how licensing differs from patent-protected intellectual property in a number of important ways. Patents, of course, are created by law, have a fixed term and geographic effect and are public, all in sharp contrast to the amorphous, indefinite and private nature of know-how. Further, a patent, being a property right, includes the right to exclude others

from unauthorized use of the innovation while know-how can be independently discovered and used, placing a premium on secrecy."

It is in the retained secrecy of know-how that the successful breeding of a plant variety, through the application of biotechnology employing DNA methods, can lead to increased concentration of market power in the dispensation of hybrid seed and frustrate the objectives of competition policy. It is precisely the threat of globalization and privatization of intellectual property that may in future control our food production system that should concern government regulators.

The question we pose in all seriousness is, does this Committee fully understand the far-reaching ramifications that can follow in the wake of plant breeders' patent rights as represented by Bill C-15?

The licensing of intellectual property automatically bestows market power upon the patent holder which, in turn, can be exercised to leverage or extend market power through restrictions in licensing.

While much is made of the role of competition in regulating prices, the OECD reports on various forms of licensing agreements between licensors and licensees which are considered to be anti-competitive. These can be found in exclusivity clauses, tie-in clauses, price-restrictive clauses, output, territorial, customer or field-of-use restraints. We believe this whole area of corporate business ethic will descend upon us upon the passage of Bill C-15. We question how well prepared our regulatory agencies are to cope with these challenges.

The OECD reviews Canada's Competition Act and notes that four sections refer specifically to intellectual property rights: Section 29 dealing with abuse of patents and trade marks, Section 38 relating to price maintenance, Section 51 concerning abuse of dominant position, and Section 58 relating to specialization agreements.

Under Section 29, the Attorney General may apply to the

Federal Court of Canada for an order nullifying a licensing agreement or enjoining its exercise. Applications under Section 29, notes the report, have been made by the Attorney General in only two cases during the past three decades.

Violations of Section 38 are a criminal offense subject to fines and up to 5 years of imprisonment but several exemptions are set out in Subsection 38(9).

Section 51, dealing with abuse of dominant position, is a non-criminal provision, but Subsection 51(5) indicates Section 51 is not intended to affect the legitimate exercise of intellectual or industrial property rights.

Section 58 provides a civil review process to deal with specialization agreements which may involve aspects of cross-licensing or patent pooling.

We believe our Competition Act is weak in its protective clauses as they relate to intellectual property and it is unlikely to seriously challenge the commercial activities and business ethics of multinational seed companies now poised to invade our markets.

This is a matter which raises apprehensions about our vulnerability as farmers to the possibilities of exploitive trade practices which may accompany broader international access to our seed markets.

PRIVATIZATION OF OUR PUBLIC RESEARCH PROGRAMS:

No convincing proof has been offered to rationalize why the Canadian seed market should now be opened up to permit the entry and patenting of foreign plant cultivars. The change in direction appears to be dictated by the current rampant philosophy of privatization which dominates the political mood of government. The direction in which this current trend is drawing us will, we believe, devastate the public research institutions that have so well served Canadian agriculture and again compromise our sovereignty as we are drawn further into the global economy.

The deliberate government strategy in capping the funding needs of our public research institutions has resulted in the contraction of their research efforts by attrition. It has created the environment for the private sector to profit from public research efforts. Bill C-15 is an extension of the transfer of power to the private sector inasmuch it bestows, through patenting and royalty provisions, a power of taxation on future food production. To be told that public research can benefit from royalty rights is of little comfort to farmers since the bottom line to royalty earnings at every level is that they are paid by farmers.

The implications of increasing financial tie-in between the private corporate sector and the research branches of our universities is alarming. If universities are to be truly considered as institutions of higher learning, there should be no circumstances under which the research efforts of scientists should be co-opted and held secret to protect the vested interests of private donors.

Intellectual property successfully researched in our public institutions should be broadly shared with all those engaged in higher learning. Only through the provision of adequate public funding can we maintain high plant research standards and long-term commitments. Such funding should not be conditional upon the need to tax farmers through a royalty system when new varieties are developed.

Earlier reference was made to Allelix Inc. which illustrates a further example of how our national interests can be prejudiced by joint partnership arrangements between public and private interests.

Allelix was structured in 1983 with $90 million in government and private financing. The principals were the Canada Development Corporation, the Ontario Development Corporation and Ault Foods owned by John Labatt Ltd. (The CDC share is now owned by the Nova Corporation.)

Much of its research effort has been directed toward the development of a herbicide-resistant canola hybrid but its interests in canola do not end there. It is now involved in a major drive to bring canola production to the south-east region of the United States.

It is employing a Swedish canola variety under patent to the Volvo corporation and is known as "Delta."

Thus, at a time when Canadian farmers are led to believe that a vast future market for canola exists in the U.S., a Canadian corporation partially funded by public funds is assisting to make those future markets less accessible.

This illustrates the global nature of corporate business ethics and makes clear that national priorities and concerns have no place in the corporate boardrooms where profit is the bottom line to every decision.

Meanwhile, an Allelix press release of September 23/88 announces it collaboration with l'Université Laval and Agriculture Canada to develop technologies used to genetically engineer canola. The three-year project is being financed by a grant from the National Research Council. An Ottawa laboratory of Agriculture Canada will apply technology of micro-injection (inserting a forein gene into a plant cell's nucleus) to create the new hybrid variety.

Who will profit and who will pay?

SUMMARY AND CONCLUSION:

We view Bill C-15 is a legislative instrument designed to further draw Canadian agriculture into the globalization of food production by permitting the expansion of market power of multi-national seed corporations.

We have examined a number of issues that are related to the acceptance of this legislation. Let there be no mistake - the application of plant breeders' patent rights legislation will have far-reaching implications upon the farm community.

A number of issues have been pinpointed including:

a) the implications to the future of the public research effort in Canada amidst a move toward greater privatization;

b) the implications upon farmers of the philosophical change

by government in research emphasis from one which has been designed to serve national needs to one which places increasing emphasis on cost recovery, privatization and profit goals;

c) the possibilities for greater vulnerability of Canadian quality standards which can attend the admission of a wide range of foreign cultivars, either legally or illegally;

d) the exclusive patenting of genetic material, the monopoly of which may hamper research efforts of other institutions;

e) the potential for phasing out research funding for crops of less profitable potential;

f) the potential for restricting farmers' privilege in retaining seeds for self-use without payment of royalties;

g) the loss of self-reliance and added cost for farmers who have converted to the hybrid varieties;

h) the shortcomings in competition policy to regulate undue economic exploitation of intellectual property rights;

i) the implications of joint ventures between government and university research efforts and private capital as they apply to access of research information.

j) the manner in which potential national export opportunity (canola) can be undermined by a joint venture organization in which public funds are invested.

The passage of Bill C-15 would authorize the introduction of private plant breeders' patent rights into Canada. It brings forward the realization that we have been confronted by a new philosophy and approach to the plant breeding scene in which the future of our public programs will become extremely vulnerable.

The profit motive is the bottom line of the private plant breeding corporation or conglomerate. It has no particular allegiance

to Canada or dedication to meeting farmers' needs. It has no particular interest in even engaging in research in this country. But it does have an interest in expanding its markets for whatever it may have to sell - whether seeds, chemical sprays or fertilizers.

We urge that this Committee recommend the tabling of Bill C-15.

We further recommend the full reinstatement of responsibility and jurisdiction for plant research and distribution with our public research institutions, adequately funded and dedicated to serving as first priority the national interest and the interests of farmers.

- 30 -

All of Which is Respectfully
Submitted by:

NATIONAL FARMERS UNION